34. (currently amended) A method for controlling imaging in an x-ray ~~a dosimetric electronic portal imaging~~ therapy system, the method comprising:

(a) generating low dosage x-ray radiation, the low dosage adapted for verifying patient position;

(b) avoiding scanning of a electronic portal imaging device during (a); and

(c) scanning the electronic portal imaging device after (a).

35. (original) The method of Claim 34 further comprising:

(d) delaying (c) for a time period after x-ray radiation of (a) ceases.

36. (original) The method of Claim 34 further comprising:

(d) scanning the electronic portal imaging device prior to (a).

REMARKS

In the Office Action, the Examiner rejected claims 1-8 and 17-36 pursuant to 35 U.S.C. § 112, second paragraph as indefinite. Claims 1-36 were rejected pursuant to 35 U.S.C. § 112, first paragraph, as not enabled. Claims 1-4, 6-19 and 21 were rejected pursuant to 35 U.S.C. § 102 (a,e) as anticipated by Forjdh (U.S. Patent No. 6,307,915). Claims 20 and 22-27 were rejected pursuant to 35 U.S.C. § 103(a) as unpatentable over Forjdh. Claims 5 and 28-33 were rejected pursuant to 35 U.S.C. § 103(a) as unpatentalble over Forjdh in view of Bertsche (U.S. Patent No. 6,487,274). Applicants respectfully request reconsideration of the claims 1-30 and 34-36, including independent claims 1, 9, 14, 17, 22, 28 and 34.

For claims 1-8 and 17-36, the preamble words "dosimetric electronic portal imaging therapy system" were alleged to be unclear. For claims 1-36 "x-ray therapy" system is enabled, but more generic systems and methods allegedly are not enabled. The preambles have been amended to replace "dosimetric electronic portal imaging therapy system" with "x-ray therapy system." This amendment removes the alleged unclear working and is enabled.

Claims 2 and 7 have been amended with further structural limitations. Claim 3 has been cancelled. Claims 20 and 22 have been amended to clarify that the gain correction is as a function of line associated with a linear artifact.

Claim 1 requires an imaging device with a scan trigger input connected with a data output from an x-ray source where the data output is separate from an x-ray output. Forjdh does not disclose these limitations. Forjdh uses x-rays to trigger scanning (abstract). Image capture starts once a sufficient number of reference pixels reach a threshold (Col. 3, lines 53-57). The image sensor has an array of pixels for detecting x-rays (Col. 3, lines 41-48). The reference pixels used for triggering are part of the array for detecting x-rays (Col. 3, lines 49-53). Forjdh triggers scanning by detecting x-rays, not by a scan trigger input connected with a data output of the x-ray source separate from the x-ray output.

Independent claim 9 requires a low dose circuit responsive an x-ray source high voltage power-on signal and a radiation-off signal, and a high dose circuit responsive to an x-ray pulse signal. Forjdh does not disclose these limitations. First, Forjdh does not provide for both low dose and high dose circuits. Second, Forjdh uses x-ray detection to start scanning. Forjdh does not show a circuit responsive to a power-on signal from an x-ray source. Forjdh is responsive to x-rays being transmitted and not transmitted, so does not use other signals from the x-ray source.

Independent claim 14 requires an input from an x-ray machine separate from an x-ray detector where a trigger signal is response to an input signal on the input. As described above for claim 1, Forjdh detects x-rays to start a scan. Forjdh does not use an input separate from an x-ray detector.

Independent claim 17 requires x-ray pulses and an electric signal where imaging is synchronized with the x-ray pulses as a function of the electric signal being input to an imaging device. Forjdh start scans by detecting x-rays, not an electric signal input to an imaging device.

Dependent claims 2, 4, 6-8, 10-13, 15-16, 18-19 and 21 depend from the independent claims discussed above, so are allowable for the same reasons. Further limitations distinguish the dependent claims from Forjdh. For example, Forjdh does not disclose a trigger input on an imaging device as claimed in claim 3; an interface circuit between an x-ray source output and an imaging device scan trigger input as claimed in claims 6 and 7; a mode signal indicating one of a low dose and a high dose as claimed in claim 8; a pulse width circuit as claimed in claims 10 and 11; a monostable multivibrator as claimed in claim 15; generating trigger signals for less than all of the beginnings of x-ray pulses as claimed in claim 19; and the high dose and low dose modes as claimed in claim 21.

Independent claim 22 requires gain correction as a function of a line with a gain correction image where the line is associated with a linear pulse artifact. Frojdh does not disclose gain correction. Forjdh does not disclose gain correction as a function of a line associate until a linear pulse artifact.

Dependent claim 20 has similar limitations, so is allowable for the same reasons.

Dependent claims 23-27 depend from claim 22, so are allowable for the same reason. Further limitations are not suggested by Forjdh, such as: increasing the gain for lines as claimed in claim 24; decreasing the gain for lines as claimed in claim 25; and measuring a quantity as claimed in claim 27.

Independent claim 28 requires triggering a scan prior to generating low dose x-rays and in response to preparing an x-ray source for generating x-rays. Forjdh triggers in response to detected x-rays, not prior to generation of x-rays.

Bertsche discloses taking a verification x-ray image prior to therapy (Col. 1, line 66 - Col. 2, line 8). Low-energy and high energy x-rays are used in a repeating sequence to acquire images for therapy (Col. 6, lines 5-13). Bertsche switches between x-rays, but does not disclose triggering in response to preparing an x-ray source for generating x-rays.

Dependent claims 29 and 30 depend from claim 28, so are allowable for the same reasons.

CONCLUSION:

Applicants respectfully submit that all of the pending claims are in condition for allowance and seeks early allowance thereof. If for any reason, the Examiner is unable to allow the application but believes that an interview would be helpful to resolve any issues, he is respectfully requested to call the undersigned at (650) 694-5810 or Craig Summerfield at (312) 321-4726.

Respectfully submitted,

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